We claim:

1. A method for encoding a signal, comprising the steps of:

filtering said signal using an adaptive filter controlled by a psychoacoustic model, said adaptive filter producing a filter output signal and having a magnitude response that approximates an inverse of the masked threshold; and

quantizing and encoding the filter output signal together with side information for filter adaptation control.

2. The method of claim 1, wherein said quantizing and encoding step uses a transform or analysis filter bank suitable for redundancy reduction.

3. The method of claim 1, further comprising the steps of quantizing and encoding spectral components obtained from a transform or analysis filter bank, and wherein said quantizing and encoding steps employ fixed quantizer step sizes.

4. The method of claim 1, wherein said quantizing and encoding step reduces the mean square error (MSE) in said signal.

5. The method of claim 1, wherein the filter order and the intervals of filter adaptation of said adaptive filter are selected suitable for irrelevancy reduction.

6. The method of claim 1, wherein said signal is an audio signal.

7. The method of claim 1, wherein said signal is an image signal and said adaptive filter is controlled in a way that said magnitude response approximates an inverse of a visibility threshold.

8. The method of claim 1, further comprising the step of transmitting said encoded signal to a decoder.

9. The method of claim 1, further comprising the step of recording said encoded signal on a storage medium.

10. The method of claim 1, wherein said encoding further comprises the step of employing an adaptive Huffman coding technique.

11. The method of claim 1, wherein said filtering step is based on a frequency-warping technique using a non-linear frequency scale.

12. The method of claim 1, wherein the coding stage for filter coefficients comprises a conversion from LPC filter coefficients to lattice coefficients or to Line Spectrum Pairs.

13. A method for encoding a signal, comprising the steps of:

filtering said signal using an adaptive filter controlled by a psychoacoustic model, said adaptive filter producing a filter output signal and having a magnitude response that approximates an inverse of the masked threshold; and

transforming the filter output signal using a plurality of subbands suitable for redundancy reduction; and

quantizing and encoding the subband signals together with side information for filter adaptation control.

14. The method of claim 13, wherein said quantizing and encoding step uses a transform or analysis filter bank suitable for redundancy reduction.

15. The method of claim 13, further comprising the steps of quantizing and encoding spectral components obtained from a transform or analysis filter bank, and wherein said quantizing and encoding steps employ fixed quantizer step sizes.

16. The method of claim 13, wherein said quantizing and encoding step reduces the

mean square error (MSE) in said signal.

17. The method of claim 13, wherein the filter order and the intervals of filter adaptation of said adaptive filter are selected suitable for irrelevancy reduction.

18. The method of claim 13, wherein said filtering step is based on a frequency-warping technique using a non-linear frequency scale.

19. The method of claim 13, wherein the coding stage for filter coefficients comprises a conversion from LPC filter coefficients to lattice coefficients or to Line Spectrum Pairs.

20. A method for decoding a signal, comprising the steps of:

decoding and dequantizing said signal;

decoding side information for filter adaptation control transmitted with said signal; and

filtering the dequantized signal with an adaptive filter controlled by said decoded side information, said adaptive filter producing a filter output signal and having a magnitude response that approximates the masked threshold.

21. The method of claim 20, wherein said decoding and dequantizing step uses an inverse transform or synthesis filter bank suitable for redundancy reduction.

22. The method of claim 20, further comprising the steps of decoding and dequantizing spectral components obtained from a transform or synthesis filter bank, and wherein said decoding and dequantizing steps employ fixed quantizer step sizes.

23. The method of claim 20, wherein the filter order and the intervals of filter adaptation of said adaptive filter are selected suitable for irrelevancy reduction.

24. The method of claim 20, wherein the decoding stage for filter coefficients

comprises a conversion from lattice coefficients or to Line Spectrum Pairs to LPC filter coefficients.

25. A method for decoding a signal transmitted using a plurality of subband signals, comprising the steps of:

decoding and dequantizing said transmitted subband signals;

decoding side information for filter adaptation control transmitted with said signal;

transforming said subbands to a filter input signal; and

filtering the filter input signal with an adaptive filter controlled by said decoded side information, said adaptive filter producing a filter output signal and having a magnitude response that approximates the masked threshold.

26. The method of claim 25, wherein said decoding and dequantizing step uses an inverse transform or synthesis filter bank suitable for redundancy reduction.

27. The method of claim 25, further comprising the steps of decoding and dequantizing spectral components obtained from a transform or synthesis filter bank, and wherein said decoding and dequantizing steps employ fixed quantizer step sizes.

28. The method of claim 25, wherein the filter order and the intervals of filter adaptation of said adaptive filter are selected suitable for irrelevancy reduction.

29. The method of claim 25, wherein the decoding stage for filter coefficients comprises a conversion from lattice coefficients or to Line Spectrum Pairs to LPC filter coefficients.

30. An encoder for encoding a signal, comprising:

an adaptive filter controlled by a psychoacoustic model, said adaptive filter producing a filter output signal and having a magnitude response that approximates an inverse of

the masked threshold; and

a quantizer/encoder for quantizing and encoding the filter output signal together with side information for filter adaptation control.

31. An encoder for encoding a signal, comprising:

an adaptive filter controlled by a psychoacoustic model, said adaptive filter producing a filter output signal and having a magnitude response that approximates an inverse of the masked threshold; and

a plurality of subbands suitable for redundancy reduction for transforming the filter output signal; and

a quantizer/encoder for quantizing and encoding the subband signals together with side information for filter adaptation control.

32. A decoder for decoding a signal, comprising:

a decoder/dequantizer for decoding and dequantizing said signal and decoding side information for filter adaptation control transmitted with said signal; and

an adaptive filter controlled by said decoded side information, said adaptive filter producing a filter output signal and having a magnitude response that approximates the masked threshold.

33. A decoder for decoding a signal transmitted using a plurality of subband signals, comprising:

a decoder/dequantizer for decoding and dequantizing said transmitted subband signals and decoding side information for filter adaptation control transmitted with said signal;

means for transforming said subbands to a filter input signal; and

an adaptive filter controlled by said decoded side information, said adaptive filter producing a filter output signal and having a magnitude response that approximates the masked threshold.